DOCUMENT RESUME

ED 373 302 CG 025 719

AUTHOR	Glynn, Thomas J.
TITLE	School Programs To Prevent Smoking: The National Cancer Institute Guide to Strategies That Succeed.
INSTITUTION	National Cancer Inst. (NIH), Bethesda, Md.
REPORT NO	NIH-Pub-94-500
PUB DATE	Apr 94
NOTE	27p.
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Adolescents; Children; *Early Intervention; Educational Responsibility; Elementary Secondary Education; *Prevention; School Responsibility; *School Role; *Smoking; Tobacco
IDENTIFIERS	National Cancer Institute

ABSTRACT

This guide to school-based smoking prevention programs for educators is the product of five years of work to prevent cancer. The National Cancer Institute (NCI) is currently funding 23 coordinated intervention trials directed at youth. Although not all the studies are complete, sufficient results are available to recommend the most effective smoking-prevention techniques to educators. This booklet presents the results of experts convened by the NCI to review the available data on adolescent smoking prevention and to determine which prevention strategies warrant wider use. These recommendations include simple, practical lessons that should be useful to school administrators, health educators, and teachers who develop, authorize, or implement smoking prevention and who determine which prevention strategies warrant wider use. This study does not contain detailed curricula or lesson plans; instead, it offers statistics on smoking usage and trends and outlines eight strategies and eight recommendations to prevent smoking in adolescents. Also included is an annotated list of some available resources for school-based smoking programs along with some selected references. (RJM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 373 302

chool Programs To Prevent Smoking:

The National Cancer Institute Guide to Strategies that Succeed

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

NATIONAL INSTITUTES OF HEALTH
National Cancer Institute

CG025719

2 BEST COPY AVAILABLE

chool Programs To Prevent Smoking:

The National Cancer Institute Guide to Strategies that Succeed

by
Thomas E. Glynn, Ph.D.

Smoking, Tobacco, and Cancer Program
National Cancer Institute

U.S. Department of Health
and Human Services
Public Health Service
National Institutes of Health

NIH Publication No. 93-3500
Reprinted April 1993

Table of Contents

Preface v

Acknowledgments vii

Introduction 1

Strategies 5

Conclusion 9

Available Resources 11

Additional Information 19

Selected References 23

Preface

This guide to school-based smoking prevention programs for educators is the product of 5 years of work to prevent cancer. The National Cancer Institute (NCI) established its Smoking, Tobacco, and Cancer Program in 1982 to develop, test, and disseminate the most effective techniques to reduce the prevalence of tobacco use in America. A key part of this program is a series of studies focusing on school-based approaches to prevent smoking and tobacco use among adolescents.

The knowledge that smoking prevalence rates cannot be significantly reduced without reducing smoking onset among adolescents led the NCI to support 23 coordinated intervention trials directed at youth. Each has one of three goals: to develop new curricula or techniques for smoking prevention, to adapt existing curricula for smoking prevention to more current approaches or to special populations, or to conduct long-term followup of youths who were exposed to smoking prevention programs in schools as long as 10 years ago. These studies, conducted by distinguished investigators in the field of smoking control, have involved more than 7,000 teachers and nearly a million young people.

There are now sufficient results from these trials to recommend the most effective techniques to educators and to make this information available as widely as possible. That is the purpose of this guide.

Given the pressing demands on our schools to educate youth about a wide variety of academic topics, the strategies outlined in this guide are designed to be incorporated within existing school programs. While every school and its students are unique, the recommended strategies can be adapted to virtually any educational setting. As discussed in the guide, not all students who are exposed to these prevention programs will be prevented from ever using tobacco. Most students who would have used tobacco at an early age, however, can be delayed in their decision to use tobacco. This delay can reduce the chance that they will become regular smokers as adults and make it easier for them to stop smoking if they do take up the habit. Accordingly, this guide recommends that all schools adopt a smoking and tobacco use prevention program to give their students the opportunity to make their adolescent and adult lives as healthy as possible.

The NCI has established a goal to reduce U.S. cancer mortality rates by up to 50 percent by the Year 2000. Because cigarette smoking and tobacco use are responsible for 30 percent of all cancer deaths, our goal can only be achieved if there is an effective and broadly applied attempt to reduce smoking prevalence.

Thank you for joining this important effort to improve the health of our children and reduce cancer mortality.

Samuel Broder, M.D.
Director
National Cancer Institute

Acknowledgments

The recommendations in this document were derived from two sources: the experience of the principal investigators and staff of a number of school-based smoking intervention trials funded through the Smoking, Tobacco, and Cancer Program of the National Cancer Institute (NCI); and an NCI Expert Advisory Panel convened to address the question, "What are the essential elements of a school-based smoking prevention program?" The Expert Advisory Panel was chaired by Lloyd Kolbe (Centers for Disease Control). Participating panel members were Anthony Biglan (Oregon Research Institute), Gilbert Botvin (Cornell University Medical College), Roy Davis (Centers for Disease Control, ret.), Carol D'Onofrio (University of California, Berkeley), Brian Flay (University of Illinois), C. Anderson Johnson (University of Southern California), David Murray (University of Minnesota), Ian Newman (University of Nebraska), Mario Orlandi (American Health Foundation), Cheryl Perry (University of Minnesota), Arthur Peterson (Fred Hutchinson Cancer Research Center), Steven Schinke (Columbia University), and Sarah Moody Thomas (University of New Orleans). The Panel was convened at the NCI on December 3–4, 1987.

Finally, NCI staff are grateful to Dr. Richard I. Evans for his advice and pioneering work in this field.

Introduction

The National Cancer Institute (NCI) is currently funding more than 20 intervention research trials to develop and test smoking[1] prevention programs for adolescents. Although only some of these programs are completed and more research needs to be done in many areas, the public health importance of preventing cigarette smoking makes it critical to share available results in a timely way. To assist in this process, NCI convened a panel of experts to review research on adolescent smoking prevention and determine which prevention strategies warrant wider use.

This guide presents the results of their deliberations. It offers a set of simple, practical "lessons learned" that should be useful to school administrators, health educators, and teachers who develop, authorize, or implement smoking prevention programs for young people. It does not contain detailed curricula or lesson plans; a selected list of available resources appears at the end of the guide.

Adolescent Smoking: The Problem Now

Today, as in every other day of the year, more than 3,000 adolescents in the United States will smoke their first cigarette on their way to becoming regular smokers as adults. During their lifetime we can expect that, of these 3,000 young people, approximately 20 will be murdered, 30 will die in traffic accidents, and nearly 750 will be killed by a smoking-related disease. Cigarette smoking in the United States clearly outweighs any other factor, whether voluntary or involuntary, as a cause of death.

Nearly 400,000 Americans die each year because they smoked cigarettes. In economic terms, the annual cost to the nation for smoking-related health-care costs and lost productivity is more than $65 billion. Its toll on the Nation has prompted the U.S. Surgeon General to call cigarette smoking the "chief, single, avoidable cause of death in our society and the most important public health issue of our time."

[1] The term "smoking" is used here to refer to both cigarette smoking and use of smokeless tobacco (chewing tobacco or snuff).

In his 1989 report on smoking, the Surgeon General stressed that children and adolescents hold the key to progress toward curbing tobacco use in future generations:

"The public health community should pay at least as much attention to the prevention of smoking among teenagers as it now pays to smoking cessation among adults. Comprehensive school health education, incorporating tobacco use prevention, should be provided in every school throughout the country."

Although smoking rates among youth have declined by about one-third since the 1970's, the table below indicates today's most critical challenges:

Prevalence of Daily Smoking Among High School Seniors by Sex and Educational Plans, United States, 1975-88

	Total	Sex		Plans for Higher Education	
Year		*M*	*F*	*Yes*	*No*
1975	27%	27%	26%	—	—
1976	29	28	28	21%	37%
1977	29	28	30	20	38
1978	28	26	29	18	36
1979	26	22	28	17	35
1980	21	18	24	14	31
1981	20	18	22	13	30
1982	21	18	24	13	30
1983	2[illegible]	19	23	14	30
1984	18	16	21	11	29
1985	19	17	21	13	31
1986	18	17	20	12	29
1987	19	16	20	14	30
1988	18	17	18	13	27

Source: Reducing the Health Consequences of Smoking: 25 Years of Progress. A Report of the Surgeon General, 1989, pp. 303-304.

This table suggests a number of issues concerning youth and smoking which must be considered:

1. Since 1980, smoking prevalence rates among youth essentially have leveled off after previous years of decline. This suggests that non-smoking programs introduced in schools in the 1970's were successful in affecting students who were less dependent on tobacco use. *We have now identified a more difficult-to-reach group that may require a different set of interventions* than those that have been effective to date.

2. Smoking prevalence among females has consistently exceeded that among males since 1977. In fact, smoking initiation rates are actually increasing among less educated young women.

3. Smoking rates are consistently lower for high school seniors with plans to pursue higher education than for those without such plans. In 1988, smoking rates were 13 and 27 percent in these two groups, respectively.

4. Several recent studies have indicated that *high school dropouts have excessively high smoking rates*, as much as 75 percent. These dropouts are often from low socioeconomic backgrounds and/or from ethnic minorities – groups that will require different and more intensive interventions. While such targeted approaches are being developed, existing programs need to be tailored meaningfully for these special audiences.

Schools have an important role to play in meeting these challenges and helping prevent smoking among high-risk groups. There are clear indications that the school smoking prevention programs developed thus far have had consistently positive effects on delaying the onset of smoking. (There has not been enough long-term followup to determine complete prevention of smoking.) By simply delaying smoking onset, however, school programs: 1) reduce the chance that these adolescents, even if they become smokers, will eventually develop lung cancer and other smoking-related disease; 2) reduce the possibility that they will become regular smokers as adults; and 3) make it easier for those adolescents who do start smoking to stop. *These benefits strongly support the adoption of smoking prevention programs by all schools.*

2

Strategies

Action Summary: Strategies That Succeed

Based on a comprehensive review of available research results, experts have identified eight strategies and program characteristics that have helped schools succeed with their smoking prevention efforts. Each is essential to overall program success.

1. Give smoking prevention significant attention in your curriculum—at least five classroom sessions in each of 2 years and booster sessions in senior high school.

2. Include information about the social influences on tobacco use and about tobacco's short-term effects on the body. Teach students *how* to refuse.

3. Schedule the smoking program to fit into your existing curricula—programs can be delivered effectively in a variety of sequences and classes.

4. Begin your program during the transition year from elementary to middle school or junior high, if not earlier.

5. Involve students in presenting smoking prevention programs, but have teachers lead the sessions.

6. Get parent *support* for smoking prevention programs. Active parent *participation* is not essential.

7. Train teachers thoroughly—ideally for a full day.

8. Use a smoking prevention approach that fits in with established community norms and needs so that it will be readily adopted.

Recommendations

These eight recommendations can help you plan and offer a smoking prevention program that will get results. If you already include smoking prevention in your curriculum, this guide can help you review your approach and perhaps suggest modifications that will make your programs more effective.

1. Give smoking prevention significant attention in your curriculum.

Smoking is one of the many health issues schools address. Fortunately, it is not necessary for a health-related curriculum to focus only on

smoking to succeed. Smoking can be part of a broader health curriculum as long as a minimum of *five classroom sessions in each of 2 years* are devoted to the topic. (Ten sessions per year for 3 years would be preferable, but may not be realistic in all settings.) A 1-year program is *not* enough. Additionally, booster sessions in subsequent years appear *essential* for sustained program effects.

In addition, health behavior concepts that help prevent smoking are important for other health topics such as drug abuse prevention and nutrition. Grouping related topics is an efficient way to present the information as long as smoking prevention strategies are featured prominently.

2. Include information about the social influences on tobacco use and about tobacco's short-term effects on the body. Teach students *how* to refuse.

Students need to recognize that their decisions about smoking are often influenced subtly by peers, parents, and the media. They also need to become aware that smoking is *not* the norm for people their age.

Adolescents seem to respond to learning about the immediate physical effects of smoking (e.g., shortness of breath, stained teeth). This topic should receive higher priority than information about the long-term health effects of smoking (e.g., cancer, heart disease).

Developing the skills to make decisions, solve problems, and refuse cigarettes is another key aspect of smoking prevention. These are complex skills that require practice through techniques such as modeling and role play; they involve more than the "just say no" approach.

These three topics represent a "minimum" list of program contents. Many other issues are appropriate for a comprehensive effort.

3. Schedule the smoking program to fit into your existing curricula.

Smoking prevention programs can be offered in consecutive five-session blocks or spread over the school year with no difference in effectiveness.

The plan may also change from year to year. For example, smoking programs can be offered in a block one year and in a spread-out fashion the next. A 10-session program could even be spread over 4 years: eight total sessions in years 1 and 2 and one booster session in each of years 3 and 4.

The sessions can be offered with equal impact through health, physical education, science, English, or social studies classes. A school's commitment to a program is more important than how the program is configured.

4. Begin your program during the transition year from elementary to middle school or junior high, if not earlier.

Ideally, smoking prevention programs should be offered in all grades, *including* elementary school. Where this approach is not feasible, program efforts should begin at the time smoking most often begins: in

grades 6 or 7, whichever is the first year after elementary school. Programs should continue at least through grade 9. The sixth-to-ninth-grade period is when adolescents seem to be most vulnerable to smoking initiation. It is also the opportunity to provide information about smoking to those who may drop out of school after the ninth grade.

5. Involve students in presenting smoking prevention programs, but have teachers lead the sessions.

The most effective programs are led by teachers with students assisting in program delivery. It is important to train the student assistants adequately to ensure that they present information accurately. It is also important to involve teachers who are comfortable working with student leaders.

The students may be selected by the teacher or administrator, appointed by a student organization, or elected by class members. As role models and opinion leaders, these students can also be expected to have ongoing influence on nonsmoking norms outside the classroom.

6. Get parent *support* for smoking prevention programs. Active parent *participation* is not essential.

Research shows that it is *not* necessary for program success to involve parents actively in school smoking prevention efforts. In programs for students in junior high school and above, part it participation may actually be counterproductive.

It is important, however, that parents recognize the value of such programs and support the school's nonsmoking goal, especially the development of school-wide nonsmoking policies.

7. Train teachers thoroughly.

A key to program success is presenting a prevention curriculum accurately. It must be faithful to the major goals and content of the original evaluated program. Teachers need thorough training to accomplish this objective. Although training may involve costs and logistical problems, research shows that the investment is critical to program impact. Ideally, training should last a full day and include opportunities for role play and interaction with student assistants.

8. Use a smoking prevention approach that fits in with established community norms and needs so that it is readily adopted.

It will be easier to implement a program that accommodates the perspectives and real-life situations of students, parents, educators, school administrators, and community residents. For example, in a community in which drug abuse is a pressing public issue, a health curriculum that focuses only or principally on smoking might not be accepted. A substance abuse program that includes both topics—cigarette smoking and drug abuse—might be easier to institute.

Other issues to consider include administrative perspectives on program costs, teacher interest and enthusiasm, existing school smoking policies, and smoking patterns among youth in the community at large.

3 Conclusion

Helping adolescents stay smoke-free is not easy, and research does not yet have all the answers. The entire community needs to be involved, but schools, in particular, have a critical role in smoking prevention. The eight tested recommendations in this guide can help your school sponsor prevention programs that get results—a reduced smoking problem at school and better long-term health for students.

4 Available Resources

Although it is not comprehensive, the following listing provides a sampling of school-based smoking prevention programs. In some cases, the listing includes general health education programs for young people that have a strong—but not exclusive—focus on smoking prevention.

Entries are listed alphabetically and include brief descriptions of each program; names, addresses, and telephone numbers for each program source; and, when available, cost information. Program length, content, and, consequently, prices vary widely. Those interested in particular programs are strongly encouraged to contact the individual listed as "source" in each entry to obtain more detailed information.

Many of the programs listed were developed and tested with NCI support. Other programs were supported by other Federal agencies or are products of private or voluntary health organizations. By providing this listing, NCI informs professionals who develop, authorize, or implement smoking prevention programs for youths that such programs are available. NCI does not necessarily endorse all programs listed. Individuals aware of other appropriate programs are encouraged to provide a brief description to NCI for inclusion in future editions of this guide.

American Cancer Society (ACS) Substance Use Programs

Grades preschool-12

DESCRIPTION: Several programs providing information about substance use, including tobacco use for preschool, elementary, junior high, and high school students. In addition to these programs, individual antismoking items are available such as films, stickers, posters, videotapes, comic books, and audiocassettes.

Starting Free: Good Air for Me (preschool). Teaches children ages 3 to 5 years polite ways to tell smokers or other people how smoke makes them feel and to leave a room when someone is smoking. Uses puppets, storybooks, coloring books, stickers, and activity sheets for teachers and parents. One module.

Early Start Kit (Grades K-3). Emphasizes how the body works, good health habits, and making healthy choices. Uses a film, audiocassette, wall chart, and handouts. Four modules.

Health Network Kit (Grades 4-6). Teaches students about the decision-making process related to good health. Uses a film, audiocassette, and handouts. Three modules.

Health Myself (Grades 7-9). Focuses on teaching about health through disciplines such as science, language arts, and social studies. Uses a film, poster, and handouts. Three modules.

Teachers' guides are available for the above programs.

Breaking Free Game Pak Software (Grades 10-12). Targeted to high school students in vocational or technical curricula, this program contains software for smoking education games. For Apple or Apple-compatible computers. Three games. Also available, ***Making Decisions/Word Find User's Manual.***

COST: Free from local ACS chapters.

SOURCE: Bobbie Armstrong
American Cancer Society
1599 Clifton Road, NE
Atlanta, Georgia 30329
(404) 329-5792

Growing Healthy

Grades K-7

DESCRIPTION: A multimedia, comprehensive health program that promotes self-esteem and teaches decision-making skills to enable youth to adopt healthy attitudes and behaviors. Smoking prevention activities are woven throughout the program. They include a film, a "smoking machine" demonstration, videotapes, and two classroom experiments—a lung dissection for fifth graders and heart dissection for sixth graders. 1986. Daily 30- to 40-minute sessions recommended for 10 to 14 weeks.

COST: Ranges from $1,000 for kindergarten program to $6,500 for seventh grade program.

SOURCE: Nina Rizzo, Ph.D.
Growing Healthy
National Center for Health Education
30 East 29th Street
New York, New York 10016
(212) 689-1886

Know Your Body School Health Education Program

Grades K-7

DESCRIPTION: Helps children to acquire the necessary skills and knowledge to make positive health decisions. The smoking component of this comprehensive school health program comprises approximately one-tenth of the program and focuses on the reasons people smoke, the short- and long-term health effects of smoking, and the dangers of passive smoke. Children are also taught skills to resist pressures to smoke. 1988. Thirty-five to forty 40-minute sessions.

Biomedical screening, teacher's guide, workbooks, readers, program evaluation materials, and teacher training also available (contact source for costs).

COST: $35 per child; includes teacher guides, workbooks, and health screening.

SOURCE: Donna Cross
Know Your Body School Health Education Program
American Health Foundation
320 East 43rd Street
New York, New York 10017
(212) 953-1900

Life Skills Training

Grades 7-9

DESCRIPTION: Teaches methods for resisting pressures to smoke within the context of cultivating basic "life skills." This smoking and drug abuse prevention program provides students with information on how to set goals, change their behavior, disregard cigarette advertisements, manage stress, and develop friendships and a variety of other social skills. Designed to be implemented in one semester with booster sessions over the following 2 years. 1989. Grade 7: 15 sessions; grade 8: 10 sessions; grade 9: 5 sessions. All sessions last 40 to 45 minutes.

COST: Grade 7: $75; $5
Grade 8: $45; $4
Grade 9: $30; $3

Prices shown are for provider (teachers or others) manuals and student guides, respectively. Teacher training is available (contact source for costs).

SOURCE: Dr. Gilbert Botvin
Cornell University Medical College
411 East 69th Street, KB-201
New York, New York 10021
(212) 746-1270

Lungs Are For Life

Grades K-4

DESCRIPTION: Integrates smoking prevention materials and information into standard curricula for grades K-4. The kindergarten module describes how smoking affects the five senses. It also presents the film "Octopuff." The grade 1 module uses booklets and audiocassettes to teach the health effects of air pollution, including the effects of secondhand smoke. The grade 2 module teaches children about smoking prevention within the context of emotions, the environment, and general health. The module for grades 3 and 4 builds on previous modules, providing information about the environment, peer pressure, and good health. 1982. Grades K-2: Six 35-minute sessions; grades 3 and 4: Thirteen 35-minute sessions.

COST: May be purchased at cost plus handling. Includes a set of four modules containing teacher's guide, teaching posters, puppet, game, record or cassette, and master copy of student activity sheets. Available from local chapters of the American Lung Association. Prices vary among chapters.

SOURCE: Mr. Roger W. Schmidt
Lungs Are for Life
American Lung Association
1740 Broadway
New York, New York 10019-4374
(212) 315-8700

Minnesota Smoking Prevention Program (MSPP)

Grades 7-9

DESCRIPTION: A six-lesson curriculum based on the social influences model addresses why seventh graders start smoking; presents accurate data to correct misperceptions about tobacco use; teaches resistance skills; and helps students develop counterarguments to smoking. 1987. Six 45-minute sessions.

A booster program to MSPP, called ***Tobacco and Alcohol Connections (TAC)***, is available for grades 8 and 9. TAC is designed for use 1 to 2 years following MSPP. 1988. Four 40- to 50-minute sessions.

COST: $24.95 for MSPP. Includes program curriculum, student handouts, transparencies, guidelines for peer leader training, and a peer leader guide. $12.95 for TAC. Includes program curriculum; master copies for handouts, transparencies, and activities; and the "Pressure Point" game.
Teacher training for both programs also available (contact source for costs).

SOURCE: Verena Walton
Health Promotion Services
Hazelden Services, Inc.
1400 Park Avenue
Minneapolis, Minnesota 55404
(612) 349-4314
1-800-257-7800 (outside Minnesota)

Project PATH (Programs to Advance Teen Health)

Grades 6-12

DESCRIPTION: Approaches smoking prevention from a variety of perspectives, providing the option to integrate tobacco-related curricula into existing lesson plans for health, science, English, or social studies classes. Information is presented through class activities and discussions. Videotapes are used to teach refusal skills and to provide information on the harmful effects of cigarettes; includes "Big Dipper," an award-winning videotape on smokeless tobacco. Nine curricula packages are available. 1989.

In grade 6, students are taught refusal skills, decision-making, health facts, and skills to help parents end tobacco use. Five videotapes are shown, including "Big Dipper." Five 40- to 45-minute sessions. $300.

In grade 7, peer leaders assist teachers in reviewing refusal skills and health facts, presenting accurate data on the prevalence of tobacco use, and discussing the influence of advertising and how tobacco companies overcome bans on cigarette ads. Two videotapes are shown. Five 40- to 45- minute sessions. $350.

The eighth grade program focuses on peer and media influences as well as on health facts. Four videotapes are shown, including "Big Dipper." Five 40- to 45-minute sessions. $300.

Peer leaders are also used in the ninth grade program, continuing the focus on cigarette advertising; this curriculum also addresses passive smoke, health facts, and strategies for dealing with peer pressure. Two videotapes are shown. Five 40- to 45-minute sessions. $350.

Students in 9th, 10th, or 11th grade develop a cohesive antitobacco advertising campaign to refute messages presented in tobacco industry ads. A session on quitting tobacco use is also included. Two videotapes are shown. Five 40- to 45-minute sessions. $250.

Tenth or eleventh graders watch a film with a realistic view of the effects of smoking on cowboys, further explore cigarette advertising, and debate smokers' and nonsmokers' rights. Three videotapes are shown. Five 45-minute sessions. $250.

The dangers of passive smoke are examined by 10th or 11th graders, who conduct an experiment that demonstrates the cancer-causing potential of cigarette smoke and smokeless tobacco. One videotape is shown. Five 40- to 55-minute sessions. $150.

Students in 10th, 11th, or 12th grade examine smokers' rights, smoking bans, passive smoke, and their school's smoking policy; they debate issues that involve smoking in public places, smoking in the workplace, banning

tobacco ads, and tobacco product liabilities. One videotape is shown. Three 50-minute sessions. $150.

Tenth or eleventh graders explore tobacco use prevention through three expository writing assignments in which they rewrite a pamphlet about cigarettes to one about chewing tobacco, analyze issues surrounding bans on cigarette ads, and respond to an editorial about tobacco company liabilities. Two to ten sessions, each lasting one class period. $50.

COST: As noted after each curriculum description. Quantity discounts available; videotapes may be purchased separately. Includes curriculum, master copies of student worksheets and transparencies, peer leader training videotape, and guidelines for peer leader training. Peer leader manuals are provided with the seventh and eighth grade curricula. Teacher training available for all curricula (contact source for costs).

SOURCE: Leslie Zoref, Ph.D.
Oregon Research Institute
1899 Willamette
Eugene, Oregon 97401
(503) 484-2123

Project S.H.O.U.T. (Students Helping Others Understand Tobacco)

Grades 7-8

DESCRIPTION: Teaches students the hazards of smoking and smokeless tobacco, the effects of advertising on behavior, and the skills for resisting peer pressure to use tobacco. To reward program participation, students earn prizes donated from the business community. Project S.H.O.U.T. is ideally designed to be led by undergraduate college students. 1987. Seventh grade: ten 50-minute sessions; eighth grade: eight 50-minute sessions.

COST: $25 for each grade. Includes program curriculum and facilitator training and evaluation materials. Curriculum videotapes (1/2-inch VHS) and onsite training available (contact source for costs).

Seventh grade materials available now. Eighth grade materials available 1990. Facilitator training videotapes for each grade (1/2-inch VHS) also available 1990.

SOURCE: Dr. John Elder
PROJECT S.H.O.U.T.
San Diego State University
Center for Behavioral and Community Health Studies
Suite 100
6363 Alvarado Court
San Diego, California 92120
(619) 594-1976

Project Smart

Grade 6 or 7

DESCRIPTION: A smoking, alcohol, and marijuana prevention program. The smoking component addresses social pressures to smoke, provides resistance training, and helps students develop realistic views of the prevalence of tobacco use. The short- and long-term health effects of smoking are discussed. Part 1 is followed by a shorter booster course. 1988. Part 1: thirteen 45- to 50-minute sessions; part 2: five 45- to 50-minute sessions.

COST: $70 for parts 1 and 2. Includes curriculum guide and master copies of student worksheets. Training manuals available for $250. Contact source for cost of onsite training.

SOURCE: William B. Hansen, Ph.D.
Project Smart
University of Southern California
35 North Lake Avenue
Pasadena, California 91101
(818) 405-0472

Risk And Youth: Smoking (RAY:S)

Grades 6-8

DESCRIPTION: Uses interactive exercises to enable middle school students to understand the short- and long-term health effects of cigarette smoking and the effects of cigarette advertising on behavior. The program emphasizes that smokers lose, to some degree, personal control over their lives and that students can still make friends and maintain friendships even if they do not smoke. 1987. Ten 50-minute sessions.

COST: $25. Includes teacher's manual and master copies of student handouts. Teacher training and optional videotape also available (contact source for costs).

SOURCE: Herbert D. Thier, Ed.D.
University of California
Lawrence Hall of Science
Berkeley, California 94720
(415) 642-8718

Smoking Prevention Training For Youth

Grades 4-6

DESCRIPTION: Using established principles of human learning, this program teaches skills for resisting peer pressure and coping with stress. It also provides data on tobacco use and teaches students how to maintain friendships by initiating positive and alternative activities to smoking. 1989. Fifteen 50-minute sessions plus two 50-minute booster sessions to be given 6 months apart.

COST: Free for one set (grades 4-6). Includes teacher manual, student workbooks, and booster session curriculums. Photocopy fee charged for additional sets. Discounts available for bulk orders.

SOURCE: Steven P. Schinke, Ph.D.
Columbia University
School of Social Work
622 West 113th Street
New York, New York 10025
(212) 854-8506

University Of Vermont Smoking Prevention Curriculum

Grades 5-10

DESCRIPTION: Helps students resist pressures to smoke by presenting information and skills for decision-making, refusing cigarettes, behavior change, and stress management. At the elementary and junior high school levels, the health effects of smoking are taught. The 10th grade curriculum addresses smoking as a social issue—the influences of cigarette advertising, secondhand smoke, and smoking in public places. 1988. Grades 5-8: four 40- to 50-minute sessions; grades 9-10: three 40- to 50-minute sessions.

COST: $6 per grade. Includes program curriculum and student handouts.

SOURCE: Berta Geller
Office of Health Promotion Research
University of Vermont
225 Rowell Building
Burlington, Vermont 05405
(802) 656-4187

Waterloo Smoking Prevention Program

Grades 6-8

DESCRIPTION: A "social influences" program that teaches the short- and long-term health and social consequences of smoking and helps students identify and cope with peer pressure and other social forces that influence their behavior. The program provides information on how to persuade others to stop smoking and how to find alternatives to smoking. 1982. Grade 6: six 40-minute sessions; grade 7: three 40-minute sessions; grade 8: three 40-minute sessions.

COST: Contact source. Includes manuals for program providers (teachers or others) and peer group leaders, workbooks for students, program provider training, and evaluation materials.

SOURCE: J. Allan Best, Ph.D.
Waterloo Smoking Projects
Department of Health Studies
University of Waterloo
Waterloo, Ontario, CANADA N2L 3G1
(519) 885-1211, ext. 2278

Additional Information

Several other health education resources may address smoking prevention for youths. Listed below are some of these resources:

Combined Health Information Database (CHID). A database of 13 health education subfiles. CHID may be accessed by most public libraries or by individuals or organizations that have a subscription to BRS Information Technologies.

Teenage Health Teaching Modules. A comprehensive health education program for grades 7-12. For more information, contact:

Millie LeBlanc
Education Development Center, Inc.
55 Chapel Street
Newton, Massachusetts 02160
(800) 225-4276

Regional Centers Program. Funded by the U.S. Department of Education to help schools and communities eliminate alcohol and drug use among young people. The location of each center is listed below.

Western Regional Education Laboratory

Western Center for Drug-Free Schools and Communities
Northwest Regional Educational Laboratory
Suite 500
101 Southwest Main Street
Portland, Oregon 97204
(503) 275-9479
(800) 547-6339 (outside Oregon)

Northeast Regional Center for Drug-Free Schools and Communities

12 Overton Avenue
Sayville, New York 11782-0405
(516) 589-7022

Southeast Regional Center for Drug-Free Schools and Communities

Suite 1110
100 Edgewood Avenue
Atlanta, Georgia 30303
(404) 688-9227

Midwest Regional Center for Drug-Free Schools and Communities

Suite 302
2001 North Clybourn
Chicago, Illinois 60614
(312) 883-8888

Southwest Regional Center for Drug-Free Schools and Communities

555 Constitution Avenue
Norman, Oklahoma 73037
(405) 325-1454

There are several evaluated, multiple health risk curricula available from a variety of sources. A compendium of many of these programs has been assembled by the U.S. Public Health Service. It may be obtained by contacting:

School Health and Special Projects
Division of Health Education
Center for Health Promotion and Education
Centers for Disease Control
1600 Clifton Road, N.E.
Atlanta, Georgia 30333
(404) 329-2829

Project CHOICE. A comprehensive, multimedia approach to education about cancer prevention from kindergarten through grade twelve. For more information, contact:

Project CHOICE
829 S. 22nd Street
Arlington, Virginia 22202
(703) 979-4679

Several programs, either focusing on smoking prevention alone or including smoking prevention in a comprehensive health education program, have been developed in Canada, the United Kingdom, and Australia. These programs address more issues in youth smoking prevention and, with some modification, may be appropriate for use in the U.S. Among these programs are the following:

The PAL (Peer-Assisted Learning) Smoking Prevention Program. The PAL Smoking Prevention Program is a school-based active learning approach to attitudes, ideas, and life skills useful for 11 to 13-year-olds in making decisions about smoking. For information, contact:

Dr. Gordon Mutter
Chief, Education and Training
Health Promotion Directorate
Health and Welfare Canada
Ottawa, Ontario K1A 1V4
CANADA

Cancer Research Campaign Curriculum. This is a spiral curriculum based on three key points in young people's smoking history and includes a module on smoking cessation as well. For more information, contact:

Dr. Anne Charlton
Head, Cancer Research Campaign
Education and Child Studies Research Group
Kinnaird Road, Withington
Manchester M20 9QL
ENGLAND

Smoking and Me. This is a 1-year curriculum on smoking prevention for 12- to 13-year-olds, focusing on the social consequences of smoking. For information, contact:

Nigel Smith
Program Manager for Smoking Education
Health Education Authority
Hamilton House
Marbledon Place
London WC1H 9TX
ENGLAND

Health Education K-10 Syllabus. This is a comprehensive school-based health education plan which includes smoking prevention information and strategies throughout and complements family and community health education. For information, contact:

Michael M. Daube
Executive Director
Health Promotion and Education Services
Health Department of Western Australia
60 Beaufort Street
Western Australia 6000
AUSTRALIA

Finally, an important element in any school-based smoking prevention program is a school-wide smoking policy that reinforces what is taught in the classroom. The National School Boards Association has produced a guide to the development of such policies entitled ***No Smoking: A Board Member's Guide to Nonsmoking Policies for the Schools.*** For more information, contact:

National School Boards Association
1680 Duke Street
Alexandria, Virginia 22314
(703) 838-6722

5 Selected References in Adolescent Smoking Prevention

Ary, D.V., and Biglan, A. Longitudinal changes in adolescent cigarette smoking behavior: Onset and cessation. *Journal of Behavioral Medicine*, 1988, 11, 361-382.

Bell, C.S., and Battjes, R. (eds.). *Prevention Research: Deterring Drug Abuse Among Children and Adolescents*. National Institute on Drug Abuse Research Monograph 63, DHHS Pub. No. (ADM) 85-1334. Washington, D.C., 1985.

Best, J.A., Thomson, S.J., Santi, S.M., Smith, E.A., and Brown, K.S. Preventing cigarette smoking among school children. *Annual Review of Public Health*, 1988, 9, 161-201.

Botvin, G.J., and McAlister, A. Cigarette Smoking among Children and Adolescents: Causes and Prevention. In: *Annual Review of Disease Prevention*. C.B. Arnold (ed.). New York: Springer, 1982.

Charlton, A., Moyer, C.A., Melia, P., and Morris, C. *UICC Manual on Tobacco and Young People for the Industrialized World*. Geneva, Switzerland: International Union Against Cancer, in press.

Cleary, P.D., Hitchcock, J.L., Semmer, N., Flinchbaugh, L.J., and Pinney, J.M. Adolescent smoking: Research and health policy. *The Milbank Quarterly*, 1988, 66, 137-171.

Evans, R.I. Smoking in children: Developing a social psychological strategy of deterrence. *Preventive Medicine*, 1976, 5, 122-127.

Evans, R.I., Henderson, A.H., Hill, P.C., and Raines, B.E. Smoking in children and adolescents: Psychosocial determinants and prevention strategies. In: U.S. Department of Health and Human Services, *Smoking and Health: A Report of the Surgeon General*. Washington, D.C.: U.S. Government Printing Office, 1979.

Flay, B.R., d'Avernas, J.R., Best, J.A., Kersell, M.W., and Ryan, K.B. Cigarette Smoking: Why Young People Do It and Ways of Preventing It. In: *Pediatric and Adolescent Behavioral Medicine*. P. Firestone and P. McGrath (eds.). New York: Springer Verlag, 1983.

Flay, B.R. Psychosocial approaches to smoking prevention: A review of findings. *Health Psychology*, 1985, 4, 449-488.

Gilchrist, L.D. (ed.) Forum: Longitudinal school-based smoking prevention research. *Preventive Medicine*, 1989, 18, 220-321.

Glynn, T.J., Leukefeld, C.B., and Ludford, J.P. (eds.). *Preventing Adolescent Drug Abuse: Intervention Strategies*. National Institute on Drug Abuse Research Monograph 47, DHHS Pub. No. (ADM) 85-1280. Washington, D.C., 1983.

Glynn, T.J. Essential elements of school-based smoking prevention programs. *Journal of School Health*, 1989, 59, 181-188.

Gordon, N. Never smokers, triers and current smokers: Three distinct target groups for school-based antismoking programs. *Health Education Quarterly*, 1986, 13, 163-179.

Kandel, D.B. Stages in adolescent involvement in drug use. *Science*, 1975, 190, 912-14.

Kolbe, L., and Iverson, D. Integrating school and community efforts to promote health: Strategies, policies and methods. *Hygie*, 1985, 2, 40-47.

Leventhal, H., and Cleary, P.D. The smoking problem: A review of the research and theory in behavioral risk modification. *Psychological Bulletin*, 1980, 88, 370-405.

McAlister, A.L., Perry, C., and Maccoby, N. Adolescent smoking: Onset and prevention. *Pediatrics*, 1979, 63, 650-658.

Pirie, P.L., Murray, D.M., and Luepker, R.V. Smoking prevalence in a cohort of adolescents including absentees, dropouts, and transfers. *American Journal of Public Health*, 1988, 78, 176-179.

Reid, D. Prevention of smoking among school children: Recommendations for policy development. *Health Education Journal*, 1985, 44, 3-12.

Snow, W.H., Gilchrist, L.D., and Schinke, S.P. A critique of progress in adolescent smoking prevention. *Children and Youth Services Review*, 1985, 7, 1-19.

NIH Publication No. 74-500
Reprinted April 1974

27